

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1 to 4.

The above amendment incorporates the features of claim 5 in claim 1 and further incorporates the passage of --thereby to form fine patterns as having pattern width or diameter of 100 nm or less-- thereinto. The passage finds support on page 6, lines 6 to 9 of the specification.

The significance of this amendment will become further apparent from the remarks below.

Claims 1 to 3 and 5 are rejected under 35 U.S.C.102(e) as being anticipated by Chun, U.S. 6,486,058.

Further, claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chun, U.S. 6,486,058.

These rejections are respectfully traversed.

It is disclosed in Chun (U.S. 6,486,058) that a resist-reflow buffer layer is formed of a water-soluble organic over-coating material (WASOOM), and that any suitable water soluble organic over-coating material can be used which does not substantially react with the photoresist pattern at baking temperature and thus does not substantially form an interfacial layer with the photoresist pattern.

In the present invention, heating treatment to cause thermal shrinkage of the film of the over-coating agent is performed at a temperature that will not cause thermal fluidizing of the photoresist pattern. The temperature that will not cause thermal fluidizing of the photoresist pattern is such a temperature that when a substrate on which the photoresist pattern has been formed but no film of the over-coating agent has been formed is heated, the photoresist pattern will not experience any dimensional changes.

Performing a heat treatment under such temperature conditions is very effective for various reasons, e.g. a fine-line pattern of good profile can be formed more efficiently and the duty ratio in the plane of a wafer, or the dependency on the spacing between photoresist patterns

in the plane of a wafer, can be reduced (See page 15, line 10 to page 16, line 13). In contrast, the resist pattern overcoated with WASOOM (=resist-reflow buffer layer) in Chun reflows to shrink the size of hole openings. Chun thus does not teach or suggest the overcoating method of the present claims.

For the foregoing reasons, it is apparent that the rejections on Chun are untenable and should be withdrawn.


No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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